ROTUNDA

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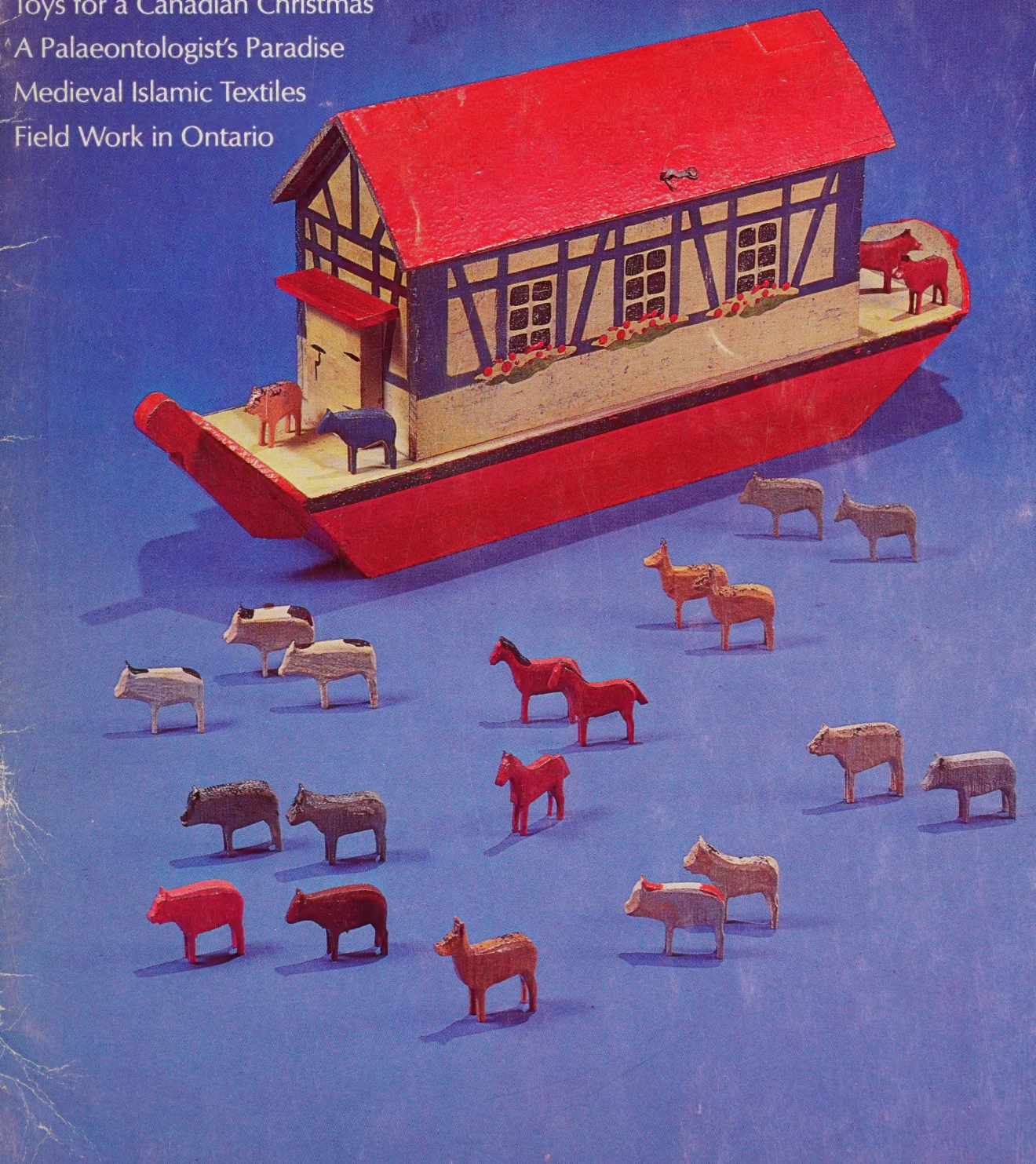
Toys for a Canadian Christmas
A Palaeontologist's Paradise
Medieval Islamic Textiles
Field Work in Ontario



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ROTUNDA

the magazine of The Royal Ontario Museum

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Focus *K. Corey Keeble* 2

Deck the Halls *Janet Holmes* 4
Toys for a Canadian Christmas

A Palaeontologist's Paradise *Desmond Collins* 12
The 1975 ROM Expedition to the 540,000,000-Year-Old Burgess Shale

The Growing Collections 20

Rags to Riches *Veronika Gervers* 22
Medieval Islamic Textiles

Blowing in the Wind *Ross D. James* 32
Some Joys and Perils of Field Work in Ontario

Recent Publications 38

Index 40

Cover: Noah's Ark, probably German, c. 1880–1900. Photograph Bill Robertson.

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On the Christmas Story in Stone

K. Corey Keeble

IN ONE OF THE MOST ELOQUENT and charming of the Medieval Mystery Plays—the Chester Play of the Nativity—Joseph is cast in the role of the archetypal sceptic who is unwilling to accept the possibility of miracles occurring in the context of a material and mundane existence. Told by Mary that she has been visited by an angel, he reacts with rage, thinking that his wife has been beguiled by some handsome young man who has taken advantage of her innocence. Told that as a virgin she will conceive and bear a child, he accuses her of speaking against nature, and when he learns that the Holy Ghost will be the agent of this conception, he recoils in horror against what he construes as a monstrous blasphemy. Later, in a dream, Joseph himself is visited by an angel, who confirms all that Mary has said. In the face of a greater reality, Joseph accepts what he knows he may never fully comprehend, and he is drawn into witnessing what St. John's Gospel metaphorically describes as the Word made flesh—an infinite and invisible God taking on tangible human form as a baby born in a manger.

During the Middle Ages, Christ's Nativity and the events leading up to and following it were among the most frequent themes used by artists and craftsmen. In the Romanesque period, from about A.D. 1000 to A.D. 1200, the Nativity was frequently expressed as doctrine made visible in a clear and concise symbolic language which emphasized the other-worldliness of Christian teaching. A superb example of this is offered in one of the true treasures of the ROM's Medieval Collection, a Catalonian Romanesque architectural capital of the period c. A.D. 1200. On the four sides of the capital are scenes of the Annunciation, the Nativity, the Journey of the Magi, and the Adoration, all in low relief.

In the scene of the Annunciation, the Angel Gabriel is shown appearing to the Virgin Mary. Extraneous detail has been eliminated—there are only the two figures, contained within a shallow niche under a semicircular arch. The message is clear and succinct. The figures are stylized, abstract, representative of a theological viewpoint rather than of any aspect of physically observed reality. Interestingly, the angel's wings blend with the

architecture of the capital, so that they exist in two realms at the same time. One wing curves up and over to correspond with the curvature of the arch overhead, while the other rises shaftlike at the extreme left of the composition to function visually as a supporting column for the architectural components above.

Turning the corner, we see the second face of the capital, depicting the Nativity. The scene is laid out according to an older iconographical concept, which was to be replaced later. The Virgin is shown reclining in a bed. Her gaze is directed outward, away from the Child, in whom she seems to take no interest. St. Joseph sits to the right, asleep, removed to one side, and remote from things he cannot understand. Behind the Child's crib are the heads of the ox and the ass, a reference to a passage in the Old Testament Book of the Prophet Isaiah.

The next scene depicts the Journey of the Magi, as mentioned in the Gospel according to St. Matthew. Although there should, of course, be three kings, at first only two are visible, dressed in the garb that Europeans associated with the East. The third king, however, is not missing from the composition: he kneels at the left corner, and marks the transition from the scene of the Journey of the Magi to that of the Adoration, in which he also appears on the extreme right, presenting his gift to the Christ Child. St. Joseph is again removed from the action—he sits asleep on the left, serving as a visual support for the architectural arch above him, which rests on top of his head.

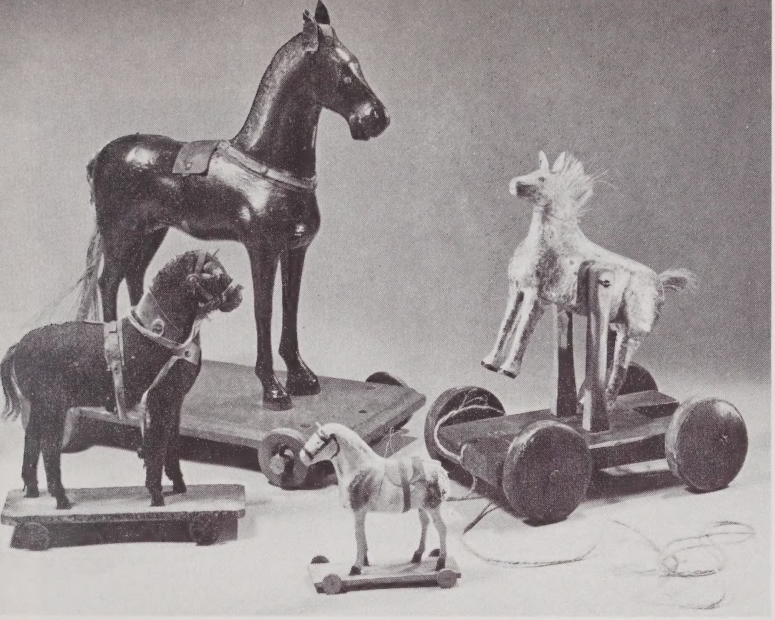
The blending of architectural elements with narrative scenes is both charming in its effect and complex in its conceptualization. Sculpture and architecture are blended so that they seem to have an autonomous and combined function at the same time. They are neither one thing nor the other, but both at the same time, a superlative visual example of the kind of dual, indeed multiple, level of symbolism of which the medieval mind was so fond. The Christmas story itself provides an example of this sort of dualism, of a supernatural invisible God taking on tangible and visible human form. Thus an exceedingly complicated theological doctrine has been realized in a marvellously effective way in this single Catalonian capital.

Corey Keeble is Assistant Curator in the European Department of the ROM.

Deck the Halls

Toys for a Canadian Christmas

Janet Holmes



Opposite page: Plaster doll with jointed neck, arms, and legs, and wire lever at back of head for opening and closing eyes, French c. 1895. Pine buffet with pottery knobs, Quebec c. 1870.

Left: Horses on wheels—from left to right, wood and composition covered with black plush, probably German c. 1895–1915; pine painted black, with leather ears and harness, probably German or American c. 1880–1900; moulded papier mâché with wooden legs, probably German c. 1900; wood painted white with blue and grey dapple, Quebec, late 19th to early 20th century.

CHRISTMAS IN CANADA has only gradually acquired many of the customs we associate with its celebration today. While Christmas Sunday or Christmas Eve church services marked the day as one of special spiritual and religious observance, in the late 18th and early 19th century the season's festive social customs were often centred on New Year's Day.

An early account of New Year's Day festivities is given by Frances Brooke in a letter dated January 1 in her novel *The History of Emily Montague*, a work that portrays the social life of Quebec City in the 1760s: "We had a million of beaux here yesterday, notwithstanding the severe cold; 'tis the Canadian custom, calculated I suppose for the climate, to visit all the ladies on New-Year's-Day, who sit dressed in form to be kissed: I assure you, however, our kisses could not warm them; but we were obliged, to our eternal disgrace, to call in raspberry brandy as an auxiliary."

Just a few days after her arrival in Canada, Anna Jameson records the same custom in Toronto on January 1, 1838. She describes the visiting as a custom borrowed from the French inhabitants of Lower Canada and notes that it was a tradition followed in France, Germany, and the United States, but not in England.

With the somewhat lighter schedule of chores in winter, Canadians made the winter season a festive one of visits, sleigh excursions, dances, and card games. One early settler wrote of being entertained by a round of dinners between Christmas and New Year's that ended with "the backwoods delicacy of beaver tails".

Christmas customs varied with the traditions settlers brought with them from their homelands, and varied, too, from carefully organized dinners in the well-settled towns to improvised arrangements in newly settled areas. For many people of English background the Christmas Day dinner brought forth special treats. Plum pudding seems to have been part of the English tradition continued here, at times under difficult conditions. John Langton, an Englishman just settled in a new house 40 miles from Peterborough, wrote to his brother: "From my own house, Jan. 9th, 1834: McAndrew was spending Xmas time with me; we had worked hard all day, flooring the loft and reducing everything to order; a table had been manufactured out of a door and two empty barrels, a table cloth was airing by the fire, silver forks, mustard, and such-like forgotten luxuries were ready to grace it . . . True I have, or

Above: The two dolls in the foreground are mechanical dolls with bisque head and arms, made by Armand Marseille, Köppelsdorf, Germany, c. 1920. The one on the stand is a mechanical doll with china head—the Autoperipatetikos patented by Enoch Rice Morrison in 1862.

had, thirty pounds of beef, and McAndrew very generously gave me a half bushel of turnips, but these are luxuries which I reserve for chance guests or such great occasions as Xmas or New Year's days . . . We tried a plum pudding at McAndrew's on Xmas day, but it was a decided failure; the currants and suet were scarce, the eggs entirely wanting, and flour by much the preponderating ingredient. We ate it in honour of the day, but it was decidedly bad . . ."

Much later, in the early 1880s, another English family—Anna Leveridge, her husband, and their children—settled in the backwoods of Hastings County, Ontario. About 1886 their Christmas dinner consisted of "a big plum pudding, and a chicken, and pork of our own raising . . . apples . . ., and some nuts and candies, and we all put our cents together and made some toffee, which is always our high treat on state occasions."

The tradition of decorated Christmas trees was probably first brought to Canada by Pennsylvania German settlers, who in turn had brought it from Germany. It was also introduced to English celebrations after Queen Victoria and Prince Albert had a Christmas tree for the children at Windsor Castle in 1841. In a letter dated February 3, 1890, Anna Leveridge writes that her two children came home on Christmas Day and set up a tree and trimmed it, and then "there were presents for all". Sometimes, though, the tree was a community one, as it was for the Leveridge family in 1891. There was "an entertainment, or a social as they call it, here at our school on Christmas Eve . . . There was a Christmas tree for the children . . . Florence put on for us each a very pretty china cup and saucer (it is fashionable in Canada to have all cups different)."

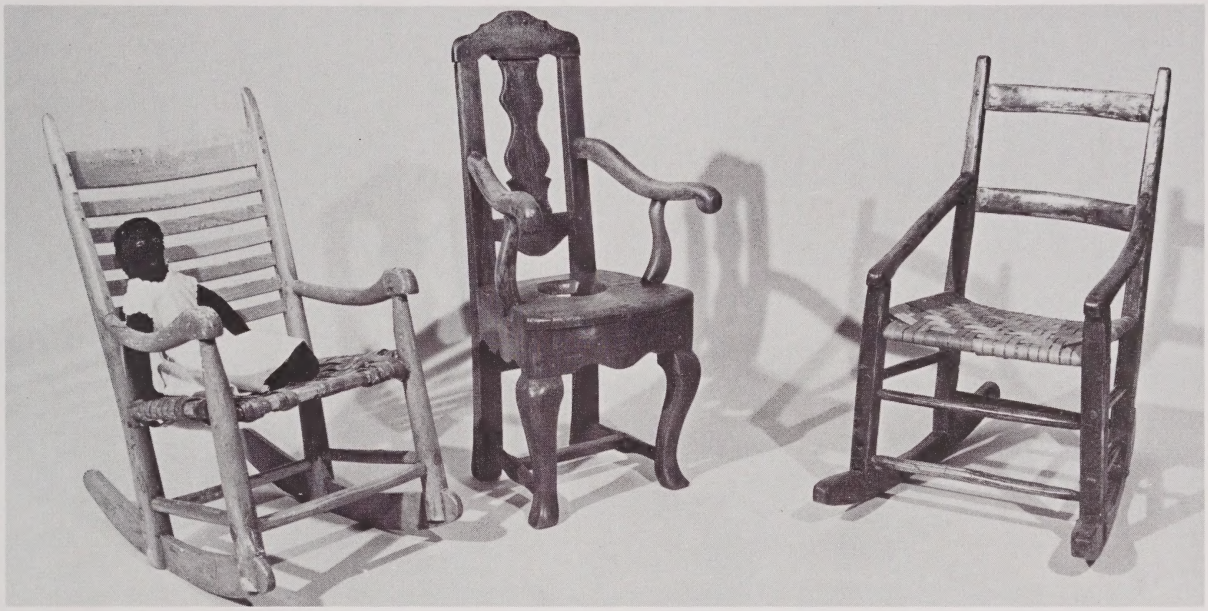
This exchange of gifts does not seem to have been an important part of Christmas in Canada in the early years of the 19th century. Diaries of the times often describe the festive meal, but toys, games, and the giving of gifts are mentioned only rarely. In 1810 and 1820 no advertisements for toys or gifts appeared in the December issues of the *Montreal Gazette*, a newspaper published in the major importing and forwarding centre of Canada. Elsewhere, though, changes were already taking place.

In England and continental Europe the early years of the Industrial Revolution had created a new, wealthy middle class whose view of children and their education was changing. No longer were children treated simply as small adults. Victorians saw them as a special group who needed recreation and affection along with a firm religious training. Thus, a large wealthy market, the new attitude towards children, and the acceleration of industrial inventiveness in mass production methods provided the impetus for the growth of a commercial toy industry.

By 1828 advertisements for toys do begin to appear

Opposite page: From left to right, doll with bisque head and hands, Japan c. 1920; doll's armchair, maple and oak with rush seat, Quebec, mid-19th century; table, butternut, Quebec, late 19th century; toy china tea set, probably English c. 1890; doll with china head, arms, and legs, German c. 1860–1880; doll's armchair, pine plank with shaped bottom rails, Quebec, mid-19th century.

Below: Two children's ladderback rockers with elm-bark seats, Quebec mid-19th century. In the centre is a child's commode chair, maple and butternut, Quebec c. 1790–1820. The black wool rag doll has embroidered eyes, nose, and mouth, Nova Scotia c. 1870–1880.



in Canada and for much of the rest of the century both Christmas Day and New Year's Day were occasions for the exchange of gifts. On October 29, 1828, *The Farmers' Journal and Welland Canal Intelligencer*, St. Catharines, Upper Canada, carried an advertisement for ". . . TOY BOOKS for children, of new and beautiful designs, kept constantly on hand at the Printing Office, St. Catharines, and sold very cheap". In 1830 the December 20 issue of the *Montreal Gazette* listed books "published expressly for the use of Young Persons . . . a great variety of Toy Books, all of which are recommended to parents as handsome and useful presents to Young Persons during the approaching Holidays". Reading deemed appropriate included adventure stories such as *Gulliver's Travels* and *Gil Blas* but also books of moral guidance—J.G. von Zimmermann's *Solitude*, I. Watt's *Hymns and Spiritual Songs*, W. Dodd's *Reflections on Death*, and J.S. Brown's *Concordance*. In the *Montreal Gazette* of December 21, 1839, Armour and Ramsay offered English annuals shipped from London via New York, describing them as "illustrated works of recent publication" and as "a large collection of Juvenile books and American annuals, neatly bound, suited for Christmas and New Year's Day presents". Although the annuals from England and the United States could be bought in Canada, often they were sent on, as were newspapers, by relatives at home. Their arrival was eagerly awaited and helped to ease the loneliness of pioneer life. Anna Leveridge mentions several periodicals sent to her from England in the late 1880s and early 1890s: *British Workwoman*, *Crystal Stories*, *Leisure Hours*, and *Sunday at Home*. In remote areas newspapers were shared with neighbours, for even "old news" made welcome reading.

By 1830, toys were being advertised; in the December 20 issue of the *Montreal Gazette* Adam Macnider offered "an invoice of toys". A great variety of toys imported from England, France, and Germany, and beginning in the 1870s from the United States, became available. An October 1, 1874, review of the "Fancy Goods Trade" in *The Merchantman*, a Toronto wholesale trade review, deals extensively with what was by then a well-established toy trade: "As long as a growing population demand the tender care of mothers so long will the toy trade flourish. On most articles there is a large margin, and although Christmas and New Year are *par excellence* the season for toys, a very fair sale is effected at all seasons." Retailers were advised that the best way to order was by the case (containing from 100 to 250 items) of assorted toys. Prices ranged from $12.83 a case for the 250-item assortment to $40.50 a case for the 100 items of higher quality.

Toys of every kind were offered for sale, at various

Above: Picture blocks, wood with six lithographed views, probably English c. 1900.

Opposite page: From left to right, swinging rocking horse, pine, with original paint on base, American c. 1912–1919; butternut rocking horse with maple rockers, Quebec mid-19th century; shoofly rocker, pine, Quebec early 20th century.

prices: animals, Chinese lanterns, brass anchors and cannons, dolls, drums, music boxes with moving figures, mechanical toys, American iron banks, horses on wheels, carts and wagons, locomotives, tin fire engines, dogs or horses on hoops, Noah's Arks, village and farm sets, tops, balls and cups, china tea sets, surprise boxes (jack-in-the-box), block maps and pictures, ABC blocks, dissected maps and pictures, Bagatelle boards with ivory balls, parlour croquet sets, carpet balls, and card games. The least expensive items were "monkey on a stick" (which sold for from $1.00 to $8.40 per gross) and the American iron penny toys. The most expensive items were special dolls: crying dolls with heads, arms, and legs of wax, natural hair, movable eyes and shoes and stockings sold for from $9.50 to $27.00 per dozen; speaking dolls that said "papa" and "mama" cost from $1.60 to $2.40 each, and extra large dolls for show windows sold at from $2.00 to $4.50 each. While the prices seem reasonable enough to the modern eye, wages in Canada in 1885 for general and farm labourers, blacksmiths, carpenters, and tailors varied from $1.00 to $1.50 or $2.00 per day, depending on the skill of the workmen and the area in which they were employed.

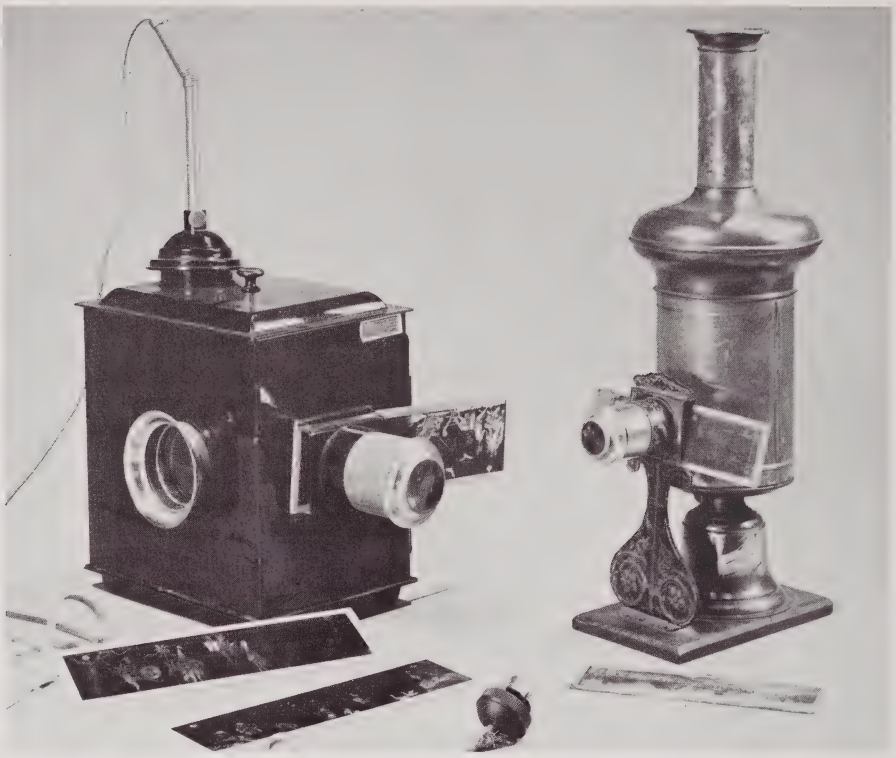
In the 18th century dolls were used for showing fashions, and in the early 19th century they began to be coveted by wealthy young women as ornaments for display. It was later, with the new attitude towards children, that they came to be regarded as toys, and by the middle of the 19th century dolls were being made in the likeness of babies and children, as well as of adults. In 1851, the Montanaris, a London doll-making family, introduced child and baby dolls at the Great Exhibition in the Crystal Palace.

In the December 21, 1839, issue of the *Montreal Gazette,* H.C. McLeod advertised "an elegant assortment of ENGLISH and GERMAN TOYS; composition and other DOLLS, dressed and undressed". In 1851, J.W. Skelton, a Toronto importer and wholesale dealer offered wax and kid dolls and India rubber dolls' heads. By 1874, dolls were considered: "the staple of the toy trade, and can be had in immense variety from the ordinary wooden jointed to the finest movable wax doll. They may be always reckoned on as good saleable stock."

The simple wooden jointed dolls very likely came from Sonneberg, Germany, the centre for the manufacture of many other varieties of wooden toys as well. Germany was also the source for dolls with china heads. The glazed porcelain heads, arms, and legs were made in various sizes. Their greatest period of popularity was from 1840 to the 1860s. The black painted hair of these dolls followed the current styles, from the smooth drawn-back style of the 1840s to the curly ringlets of the 1860s. By 1880 blonde dolls were becoming more usual. The fine wax dolls advertised in that period were of English manufacture.

Dolls came in a number of ways: assembled or in parts, dressed or undressed. Some American toy companies imported parts and assembled them in their own factories. Sometimes individuals purchased the parts for a doll, which they made up at home. Rag dolls, too, were often made at home, from scraps of leftover material. In a letter of October 4, 1885, Anna Leveridge writes of her young son Johnny and a much-loved and sometimes abused doll: "His Rosie is still in the land of the living, after being drowned and buried alive and hung on a stump and reskinned." On June 16, 1887, she mentions a parcel that had just arrived from England. One of the things it contained was "a little doll ready dressed".

After about 1860 mechanical dolls, with simple clockwork mechanisms, were made in both the United



Left, combination electric projectoscope and magic lantern, black japanned metal body, Canadian c. 1925–1935. Right, magic lantern, tin painted red, probably American c. 1890.

States and Europe. One, called the "Autoperipatetikos", was patented by Enoch Rice Morrison on July 15, 1862, in the United States and on December 20, 1862, in Europe. Clockwork mechanisms were used in other toys as well. The October 1, 1874, issue of *The Merchantman* lists in its toy trade review: "Figures on musical boxes, soldiers, bears, birds, etc." and "Man on box, eating, drinking, kissing couple, etc." Early in the 20th century, the wooden jointed dancing dolls gave way to an updated mechanized version, with a crank that could be turned to make the platform vibrate. This vibration made the jointed figure dance a fanciful jig.

Some dolls' furniture was undoubtedly homemade. Pieces have survived that were made on a turner's lathe and reveal care in construction, with mortice and tenon joints and dovetailed drawer corners; they may well have been made as miniature craft sales samples. However, there are also many pieces that follow the general style of a wing-back chair or a sideboard with a decorative curved backboard but are too roughly constructed to have been intended as anything but children's toys.

The October 1, 1874, issue of *The Merchantman* also lists toy china tea sets. Although most of these sets were imported from England and Germany, the St. John's Stone Chinaware Company, St. John's, Quebec, was making "doll sets, in both blue and plain white" in the 1880s.

Furniture, carriages, sleighs, and sledges were also made for children, usually as a sideline of the craftsmen making the full-sized models. Although I have found no advertisements for children's furniture of Canadian manufacture dated earlier than 1900, there were several children's carriage and sleigh makers here after 1860. One was H.A. Ziegler of Berlin, Ontario, who in 1878 was a "wholesale and retail manufacturer of children's carriages, sleighs, toys and varieties". Sometimes these articles were homemade. Catharine Parr Traill, in describing her Christmas in 1838, writes: "A merry day it was for them [our little ones], for our boy Martin had made them a little sledge, and there was a famous snow drift against the garden fence, which was hard packed and frozen smooth and glare—up and down this frozen heap did James and Katie with their playmates glide and roll. It was a Christmas treat to watch those joyous faces, buoyant with mirth, and brightened by the air, through the frosty panes . . ."

Horse toys were made in a great variety throughout the 19th century and well into the 20th—until they were replaced by cars and eventually aeroplanes. The 1874 offerings included horses on wheels made of wood, or composition, or tin; wooden horses and wagons; wooden and tin rocking horses; buggies with horse and driver; and express wagons with horse. Until 1865 or 1870, most of these would have come from Germany, but after that they might have come from the United States. These simple wooden toys inspired homemade copies and were also the first toys produced commercially in Canada. There were at least three

makers of wooden toys advertising in Canada in the 1870s: Mositz Lindner and H.A. Ziegler, both of Berlin, Ontario, and Edouard Martineau of Montreal.

The "shoofly" rockers for children too young to balance themselves on the rocking horse were first made by an American toymaker, Jesse Crandall, in 1859. The two flat side boards were cut in the shape of a horse, joined together by a back and seat, and mounted on rockers. Although the horse remained the favourite form for this rocker, the shoofly was advertised in the 1903 Eaton's catalogue in the shape of a swan, and on October 25, 1916, Frederick H. Williams of Montreal registered a design for a children's vehicle in the shape of a beaver.

Platform rockers saved wear and tear on rugs and floors and were made from the 1860s on. The American one illustrated on page 9 was shown in the Sears, Roebuck catalogues for 1912 and 1919.

Noah's Arks and village and farm sets were for the most part imported from Germany. After 1810, a German turner's invention sped up production of these small animals. Special horse- or pig-shaped moulds were made, which facilitated the cutting of copies from the one mould. Final details were roughly done, and then the pieces were painted in bright colours. More elaborate sets, very carefully finished, were also made and sold—at higher prices. In 1874 the price of these animal sets ranged from 60¢ to $21.00 per dozen.

Magic lanterns and slides provided an evening's entertainment for both children and adults. In the 1890s toy magic lanterns appeared, complete with kerosene lamp and chimney. By the mid-1920s a Canadian-made magic lantern had been electrified and was manufactured as a "combination electric projectoscope and magic lantern". The side lens with light and a prism was designed to project pictures, postcards, and snapshots, while the front lens was for projecting slides.

Parlour games were part of the festive celebration of Christmas and helped to while away many a pleasant hour of a winter's evening. In a letter dated January 1, 1841, Anne Langton describes their Christmas Day party: "On Christmas Day we had a card table, a backgammon table, and a chess table—the first time I have played chess since I came out." In 1851 J.W. Skelton of Toronto was selling "Chessmen, Dominoes, Pope Joan and Cribbage Boards, Backgammon Boards and Playing Cards". Many of the game boards could be made at home. In Quebec, particularly fine examples of checkerboards were made. In the 1880s, Anna Leveridge writes of her children: "They have been making themselves a set of dominoes during the wet weather. They wanted me to make them a game on cards, such as I used to play at the Rectory with Miss Lillie, but I advised them to ask their Grandma to buy them a game and send it to them if she can and will. However, they did not like to."

Toys and games were available in great variety in Canada, and at prices for every pocketbook, and from the 1830s on, Christmas and New Year's gifts were exchanged. However, it seems unlikely that any child would have received a great number of toys for Christmas in the 19th century. A letter written by Anna Leveridge on February 3, 1890, describes her family's Christmas in 1889: "The boys had new mitts, Gertie a new dress, wool hood and two nice white aprons, Katy a warm scarf, and Lily a wool hood and scarf and a doll for them, and Johnny some little toys besides apples and candies, and Mrs. T. sent sugar for toffee. So we had a nice time." Thus, then, as now, many of the gifts were practical—new warm clothing, often homemade —and the exchange of gifts at Christmas was a cheerful expression of family affection.

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Janet Holmes is a Curatorial Assistant in the Canadiana Department. She graduated in history and modern languages from the University of Toronto in 1963 and received her B.L.Sc. from McGill University in 1965. Her primary fields are the history of glass technology, the development of the Canadian glass industry, and Canadian toys. Miss Holmes contributed the chapters "Glass and the Glass Industry" and "Toys and Games" to The Book of Canadian Antiques, *edited by D.B. Webster and published by McGraw-Hill Ryerson in 1974.*

Right: Flying in ROM camp supplies, July 2, 1975.

Below: Early morning cloud in the valleys below Mount Burgess, late August 1975.

A Palaeontologist's Paradise

The 1975 ROM Expedition to the 540,000,000-Year-Old Burgess Shale

Desmond Collins

ONE FROSTY SEPTEMBER DAY in 1909, a pack train moved slowly across a steep mountain slope on the trail to Burgess Pass, near the town of Field, British Columbia, in the Canadian Rockies. Suddenly it halted, and while the horses stood with steaming breath, the leading horseman, a geologist, dismounted to examine a block of black shale which had slid onto the trail. He struck the block with his hammer and split it. Revealed to his startled gaze were beautifully preserved remains of long-extinct crustaceans never before seen. That this man, Charles Doolittle Walcott, Secretary of the Smithsonian Institution and the foremost expert of his day on the life of the Cambrian Period, should find the most remarkable occurrence of Cambrian fossils in the world, is one of the greatest

Right: Quarry in Burgess Shale 1913. Charles Walcott is on the right.

Below: Charles Doolittle Walcott.

coincidences in the history of palaeontology.

Sixty-six years later a ROM field party came to the same site. After three years of trying, with the help of the Geological Survey of Canada, I had at last received permission for the ROM to collect some of the remarkable fossils Walcott had found. Thus on a day early in July, I found myself hovering over Walcott's quarry in today's pack horse, a helicopter. We dropped a sling-load of crates and collecting gear into a snowbank and then swiftly descended 700 feet to settle on a grassy meadow below the Burgess Trail. My companion, Dale Portman, Assistant Chief Warden of Yoho National Park, indicated precisely where we were to set up our tents. While I waited at the campsite, the helicopter flew back to Field, 3,000 feet below, to pick up our gear and the other five members of the ROM party.

What a beautiful spot for a camp! Situated high on a mountainside at 7,000 feet, we had Mount Burgess and the President Range before us, Mount Wapta and Mount Field behind us, and beautiful Emerald Lake shimmering beneath us. The tens of thousands of feet of layered rocks, many bearing fossils, exposed in these magnificent surroundings made, in Walcott's words, "A Geologist's Paradise" *(National Geographic,* 1911). It was a brilliant, clear day, with the sunlight reflecting dazzlingly from patches of snow all around. The biggest nearby patch was an avalanche which had settled below the trail at the other end of the meadow. "That will be our ice-box and our water supply when it melts," I thought. (A few days later, Bob Barnett and David Rudkin were to build three small dams on the meltwater creek, using plastic sheeting and stones. That water supply lasted the whole season.)

My reverie was shattered by the return of the helicopter. Soon sling-loads of tents, tent poles, tables and chairs, camp beds, foam mattresses and sleeping bags, warm clothing, propane stoves, propane cylinders, pressure lamps, pots and pans, washbasins, portable toilets, and a two months' supply of canned food littered the camp area. The rest of the party, who had been loading the slings at the baseball diamond in Field, arrived last of all. That first day was devoted to setting up and waterproofing the cook tent, the dining tent, the supply tent, and the three sleeping tents; cutting tent floors and flies from plastic sheeting; and arranging our supplies. (With hungry Columbian ground squirrels piping all around us, we were always careful to keep the flap of the supply tent tightly zipped up. Nonetheless, we frequently found that the breakfast cereal and biscuits were being gnawed by squirrels.)

Next day we climbed the trail to Walcott's quarry. Walcott located the fossil-bearing band, the 7-foot thick "Phyllopod Bed", in 1910. In the course of five summers between 1910 and 1917, and with the aid of heavy blasting, he opened up a quarry 200 feet wide and 22 feet deep, with a back wall 20 feet high. A party from Harvard University, led by Percy Raymond, made a small collection in 1930, and opened a second quarry some 70 feet higher and to one side. In 1966 and 1967 a party from the Geological Survey of Canada reopened

both quarries with further blasting. The ROM party in 1975 was the fourth group into the quarry, but we were permitted only to pick over the loose rock slabs on the slopes, most of them discarded by the three previous groups. Furthermore, Parks Canada had requested that we collect duplicate specimens for them and for all interested museums and university geology departments across Canada—a tall order for one season.

We began splitting the slabs of rock systematically, starting on one side of the dump and slowly moving across towards the other, discarding rock fragments behind us. Periodically, we would break the routine to search at random over the whole slope. We soon learned to spot the small, common arthropod *Marrella*, by the dark stain of its dried body fluids, and the crustacean *Canadaspis*, by its red, iron-oxide colour. All specimens were carried up to the quarry where they were trimmed with a rock saw, tentatively identified, recorded, and packed into crates. Late in the second week, as our eyes became more expert in detecting faint fossil shapes on the rock slabs, we collected a host of arthropods and priapulid worms below Raymond's quarry.

At this time I returned to Toronto, leaving Bob Barnett and then Harish Verma in charge. Collecting went on as before, with individual members of the party taking breaks of a day or so to hike down to Field for a hot shower, a warm bed, and a change of menu; to hike along other trails; to photograph birds, mammals, and plants; or just to relax in camp. Once a week, mail, fresh meat, fruit, bread, and milk were brought in on pack horse by the local packer, and garbage was carried out. We were not permitted to burn or bury anything. Trail hikers frequently visited the camp, and some even came to the quarry. Two park wardens visited the quarry once in mid-summer, recorded the activities on film, and left, apparently satisfied.

Back in Toronto I received regular reports, with a running total of the fossils collected. Soon rarer fossils began to appear on the lists, some in such numbers that I thought that they must have been misidentified. In mid-summer Huibert Sabelis joined the party. He was met at the bottom of the trail by Rod Fuller, the fittest member of the party who had honed his return-trip time between the camp and Field (seven miles each way) to three and a half hours. On the hike up to the camp, Huibert was so exhausted by Rod's pace that he never again left the camp until the last day of the season. Less than impressed by the meals (we took turns in preparing them) Huibert, a former Dutch Army cook, did all the cooking from then on, producing some fine meals. Even paradise palls after a while, so that once the novelty wears off and a routine is established, it is surprising how important the prospect of a good evening meal becomes.

On my return to the party in late August I was delight-

ROM party splitting rock slabs below Walcott's quarry. Mount Wapta is in the background.

ROM party visiting Walcott's camp. Note the bough beds which have been in place on the tent floors since 1917.

ed to discover that the numerous rare fossils had *not* been misidentified. Unlike the Geological Survey of Canada party, which excavated and collected more or less the same assortment of fossils as Walcott had, we were forced by Parks Canada's stricture against excavating to scour the mountain slope, and we found dozens of rare crustaceans, several very rare jellyfish and onychophorans, and one slab bearing barnacle-like fossils never seen before. We picked up the counterpart of a very rare crustacean *(Branchiocaris)* collected by Raymond's party 45 years earlier. We also found the counterpart of a spectacular slab of crustaceans collected by Walcott and now on display in the National Museum of Natural Sciences in Ottawa. In fact, the ROM party did a splendid job, and this despite the coldest and wettest summer in recent memory.

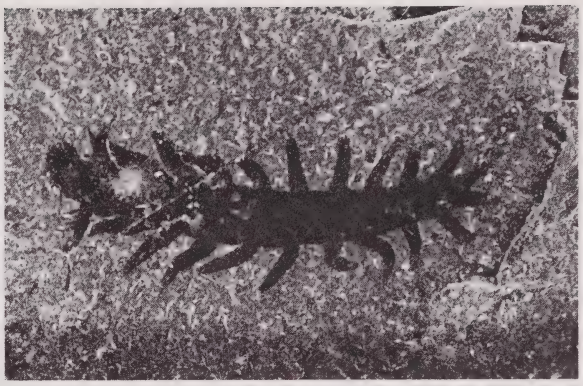
One cold, wet day we went looking for Walcott's camp. We knew it was below the trail at the head of the valley below Mount Burgess. Whereas the location of our camp was determined by the need for a landing area for the helicopter, Walcott's site was decided by the need for a permanent supply of water for his horses. We split up as we left the trail. I located the creek below Mount Burgess, headed downstream, and came across the camp in about 20 minutes. It had been little disturbed since Walcott's last occupancy in 1917. There were rough bough beds still in place on the tent floors, a corral for horses, a camp stove, a shovel, pitchers, bottles (some still with ketchup in them), and dumps of rusty tin cans. The National Park Service was less particular in 1917. The tent floors had been levelled with split rock fragments of Burgess Shale, probably mostly from the 1910 season when, in Walcott's words, they "quarried the shale, slid it down the mountain side in blocks to a trail, and transported it to camp on pack-horses, where the shale was split, trimmed and packed". We split some of these fragments and secured several very fine specimens.

Sitting on a bough bed in the quiet of Walcott's camp nestled in the tall pines, we were conscious of having stepped back to another time. We spoke quietly, as if to avoid disturbing the ghosts of 1917. The tap, tap, tap of

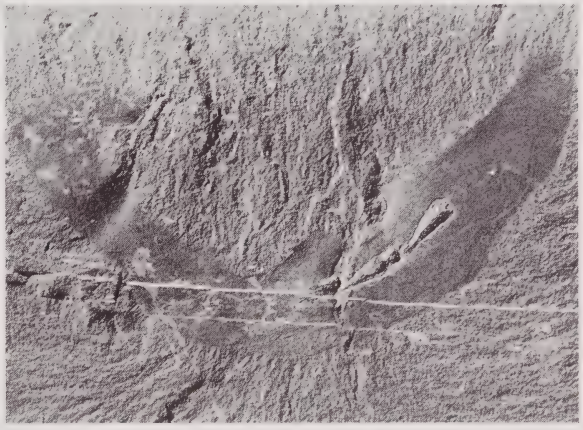
hammers on Burgess rock fragments enhanced this feeling and we could almost hear the horses snorting and jingling their harness. The spirit of Walcott surrounded us. What a remarkable man! He was already 59 years old when he discovered the Burgess Shale. He had spent the previous 30 years mapping the Cambrian rocks of North America, had helped to solve some of the most vexing problems of American geology, and, as its director, had guided the U.S. Geological Survey through 13 critical years. He was instrumental in helping establish the U.S. Reclamation Service, the Bureau of Mines, the Forest Service, the National Parks movement, and the National Advisory Committee for Aeronautics (the predecessor to NASA). His counsel led to the creation of the Carnegie Institution of Washington. His host of professional honours was capped by six years as president of the National Academy of Sciences. Despite all these commitments, during his 20 years as secretary of the Smithsonian, he still managed to spend each summer in the Canadian and American Rockies, until he was 75 years old. He usually took members of his family along. Indeed, one account attributes the discovery of the first Burgess Shale slab to Mrs. Walcott, whose horse stumbled over it.

To step back 60 years to Walcott's time is easy enough. To step back 540,000,000 years to Middle Cambrian time when the Burgess Shale animals were alive is not easy at all. The geological setting has recently been clarified: on one side, the Burgess Shale abuts the limestone "wall" of the Cathedral Formation. During the Middle Cambrian, this was a submarine cliff more than 600 feet high. Periodically, the animals swimming and crawling around on top of the cliff were carried over it by slumping sediment, and were rapidly buried at the bottom. Their remains, in the "stress shadow" of the massive limestone cliff, were protected from destruction during subsequent periods of earth movement and mountain building.

The Cambrian Period is the earliest one from which fossils are commonly found. Life was then in a highly experimental stage of development and many strange and wonderful life forms appeared, flourished briefly, and then became extinct. Usually, the further we go back in time, the less we know of what happened then. That life from such a remote period as the Cambrian is so clearly seen today in the Burgess Shale is truly amazing. In human terms, this would be like knowing as much about the life of the earliest modern man, Cro-Magnon Man, as we do about the life of the people of ancient Egypt. A few life forms seem to have changed very little, and this is also remarkable in view of their age. They include jellyfish *(Peytoia),* sea-cucumbers *(Eldonia),* and some brachiopods *(Lingulella).* Other forms, although now extinct, are common in later periods, namely trilobites, sponges, brachiopods, and monoplacophoran and hyolithid molluscs. *Aysheaia,* the only member of the caterpillar-like Onychophora known in the fossil record, has descendants alive today—with a half-billion-year gap between its occurrences. A host of strange and wonderful arthropods,



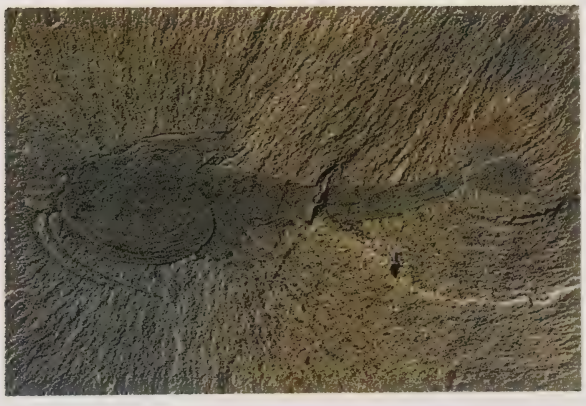
Above: Aysheaia, *a marine onychophoran.*



Above: A priapulid worm, Ottoia prolifica, *with the conical shells of swallowed hyolithid molluscs in its gut.*

Above: Burgessochaeta, *an annelid worm with bristles, from Walcott's camp.*

ROM *camp on meadow below trail. Burgess Pass is in the background.*



Above: Waptia, *a swimming marine arthropod.*

Right: A jellyfish, Peytoia.

worms, and "unknowns" make up most of the Burgess animals. Nearly all occur only at this one locality.

The little trilobitoid *Marrella* and the crustacean *Canadaspis* are very common. Another arthropod, *Waptia*, is preserved in one piece of rock as though it were swimming through water. A crayfish-like animal, *Leanchoilea*, is preserved with its gills, legs, and front claws. The arthropod *Anomalocaris*, of which only the legs are preserved, may have been six feet long. The strangest arthropod is probably *Opabinia*, which has an elongate, segmented body with side paddles; a tail like that of the Beechcraft Bonanza aeroplane; a long, elephant-like trunk with a claw at its end; and five eyes (four on stalks) on the top of its head. When Professor Whittington of Cambridge University recently presented his reconstruction of *Opabinia* to the Palaeontological Association, it was greeted with incredulous laughter.

One fat priapulid worm, *Ottoia prolifica*, was prolific. It can be seen with its proboscis either extended or still in its body, and several specimens have conical hyolithids, which they must have eaten, lined up in their gut. Another priapulid worm, *Selkirkia*, lived in a tube. Two annelid worms, *Canadia* and *Burgessochaeta*, are preserved with their bristles.

Of the unknowns, one, *Wiwaxia*, looks like a ball of wool with many knitting needles stuck through it. Strangest of all is the aptly named little scavenger *Hallucigenia*. It has seven pairs of unjointed spine-like legs, seven tentacles along its back, a cluster of short tentacles near its tail, and a globular head. Nothing like it has ever been seen before.

The air now had that crisp fall feel. Our water supply was freezing over and we had had snow. There was still the occasional day of breath-taking beauty, when clouds filled the valleys and we were isolated in the hush of the mountains. Collecting continued, but with poorer returns and rapidly dying enthusiasm. A mouse took refuge from the cold in Russ Barrows' sleeping bag. I watched the lump rippling up and down his sleeping form. The portents told us it was time to go. We broke camp on September 2, during a blizzard. It was then that we discovered that the squirrels had been getting into the supply tent through an underground tunnel which surfaced in the midst of the boxes of canned food. Late in the evening the weather cleared enough for the helicopter to come in. The crates of fossils were lifted right out of the quarry and the camp gear was picked up from the meadow below. Even the lumber and other debris the Geological Survey of Canada party had left behind were carried out, so that we left the camp area cleaner than we found it. The hot showers, hot food, and warm beds in the hotel at Field were very welcome. The next day the collection was inspected by Parks Canada and then shipped by truck and train to Toronto.

Over the past three years David Rudkin painstakingly sorted, identified, and prepared the collection. Rare forms were borrowed by palaeontologists at Cambridge University who are restudying the Burgess Shale fossils. Twenty-two universities and three museums from across Canada requested duplicate sets. We set up the ROM display of Burgess Shale fossils, the first in Canada, in the new Invertebrate Fossils Gallery, which opened in September 1977. Parks Canada has plans for a display in Field of one of their two sets. Once the sets of Burgess Shale fossils sent this summer to the 25 Canadian museums and universities are put on display, Canadians from Victoria, British Columbia, to St. John's, Newfoundland, will be able to see them. Then they, like you, will catch a glimpse of the extraordinary life of 540,000,000 years ago.

Desmond Collins came to the ROM from the British Museum (Natural History) in 1968. He took his B.Sc. (Hons) in geology at the University of Western Australia and his Ph.D. in geology at the University of Iowa. Before going to London, he worked at the Geological Survey of Canada in Ottawa. Dr. Collins was head of the Department of Invertebrate Palaeontology at the ROM from 1968 to 1977, when he asked to be relieved of this responsibility in order to devote more time to his research.

Members of the ROM field party. Back row, left to right: Rod Fuller, Russ Barrows, Huibert Sabelis, and Desmond Collins. Front row, left to right: David Rudkin, Bruce Haugh, Chandler Rowell, and Bob Barnett.

The Growing Collections

One of the long-term objectives of the European Department has been the study and display of small sculptural works of the 18th century. With this in mind, a number of fine examples of porcelain in the white have been slowly gathered over the years. In the 18th century, sculpture was regarded as a fine art, and porcelain as a fine material suitable for the purpose. As a luxury material porcelain was highly susceptible to stylistic changes. The stylistic developments in this medium can readily be demonstrated from the Baroque through Rococo, Neoclassical, and Empire styles. Porcelain figures in the white are particularly communicative, as they are uncluttered by polychrome and demonstrate very clearly the skill of the modeller and the factory repairers who assembled the figures. Such figurines are not common, as 18th-century manufacturing techniques usually resulted in a number of flaws, which were best disguised by enamel colours.

For these reasons, as well as many others, the gift of 48 examples of English "bisque" by Mrs. Murray Vaughan is of great importance. Because of its quality and variety, this gift is truly worthy of a place in a museum. Unglazed white porcelain, or "bisque", is so named because the ceramic has been subjected to only the initial first firing, or "biscuit" firing, which shrinks and dries the body. Almost all "bisque" appears pure white, chalky, and rather porous.

The majority of the pieces are from the Derby factory, famous for its "bisque" in the late 18th and early 19th century. Derby figures are useful examples of the sculpture of the period, and of themes derived from popular prints. The Vaughan gift also includes examples from various early-19th-century English porcelain factories. It would be extremely difficult to assemble such a fine collection today. The pieces fit in well with others already in the ROM collection, which includes about seven specimens of earlier 18th-century continental "bisque" (the main inspiration for the Derby pieces), and a number of English Victorian pieces which show the 19th-century taste for "statuary porcelain", as it was sometimes called. The European Department is very grateful to Mrs. Vaughan for this important gift in memory of her mother, Mrs. Howard N. Pillow. We hope to publish individual objects and to display the material either in its entirety or in rotation.

C.P.K.

In spring 1978 the Macdonald Stewart Foundation of Montreal very kindly supplied the European Department with copies of *Art Nouveau Belgium/France,* an excellent exhibition catalogue by Yvonne Brunhammer of the Musée des Arts Décoratifs, Paris. This donation was arranged by Mrs. Marian Bradshaw. The proceeds from the sale of the catalogue were to go towards the acquisition of examples of later decorative arts. To date, a number of interesting items have been acquired, including an American design text of 1916, six examples of ceramics, and two small, fine pieces of 20th-century silver. Many of these can be seen in the 19th-Century Gallery. The most commanding of the ceramics is a pair of hand-painted earthenware vases (height 43 cm) from the studio of Theodore Deck, Paris, c. 1870–1887. These are decorated with oriental-style flowers and birds set against the bright Persian blue background for which Deck was famous. Theodore Deck went on to head the National Porcelain Manufactory at Sèvres (1887–1891) and was an important influence on later French ceramics. The European Department is very grateful to the Macdonald Stewart Foundation for its generosity.
C.P.K.

A family heirloom donated by Mrs. Jean Clark of Willowdale is among the more important Canadian acquisitions of the Textile Department. Made of three widths of hand-woven linen and embroidered with plied woollen yarns, called "crewels", this coverlet is typical of colonial embroideries based on 18th-century English models. Its sparse floral designs and frugal use of limited supplies of imported woollen yarns bespeak the harshness of pioneer life.

Although this type of embroidery is known from the northeastern United States, the name "Jane Wallis" carefully worked in cross-stitch beneath the central motif confirms a Canadian provenance. Jane Wallis, great-grandmother of the donor, was born in Yorkshire, England, came to Kingston, where she married, and then moved to Toronto. This very rare embroidery is further documented with the date, "April 1821", embroidered beneath the name—probably marking its addition to Jane Wallis's trousseau.
J.E.V.

Rags to Riches

Medieval Islamic Textiles

Veronika Gervers

THROUGH THE GENEROSITY OF Messrs. Federico and Albert Friedberg of Toronto, the Royal Ontario Museum has recently acquired a major collection of medieval Islamic textiles. The collection, unparalleled in magnitude in the western world, opens new perspectives for the study of Mediterranean textiles in general.

The collection was assembled in Egypt by three generations of the Abemayor family—between the last quarter of the 19th century and the period of the Second World War. The Abemayors, who were among the most renowned dealers in Egyptian and classical antiquities, set up their first shop in Cairo in 1888, and they continued in business in that city until 1947. Then in 1948 Mr. Michel E. Abemayor (1912–1975), the last dealer in the family, moved to the United States, where he carried on his antique trade in New York City.

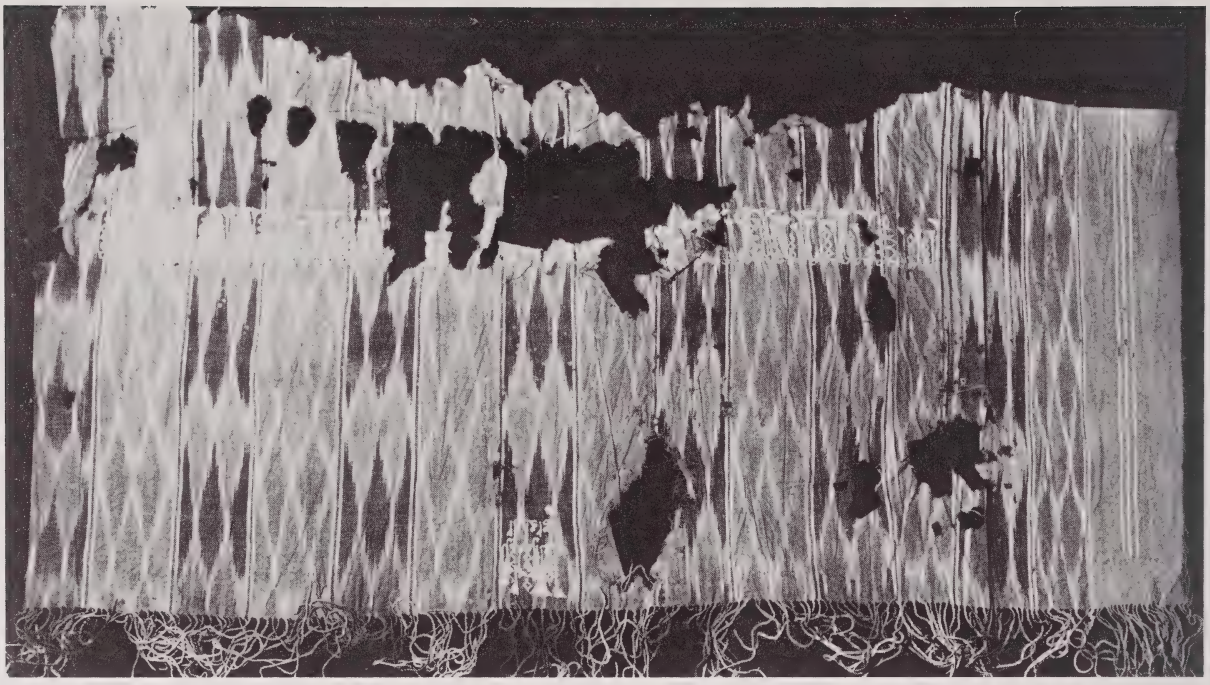
The significance of these textiles is many-sided, and to appreciate their context we need to know something about the historical questions they raise, and also about the artistic quality of weaving and embroidery in the Islamic world.

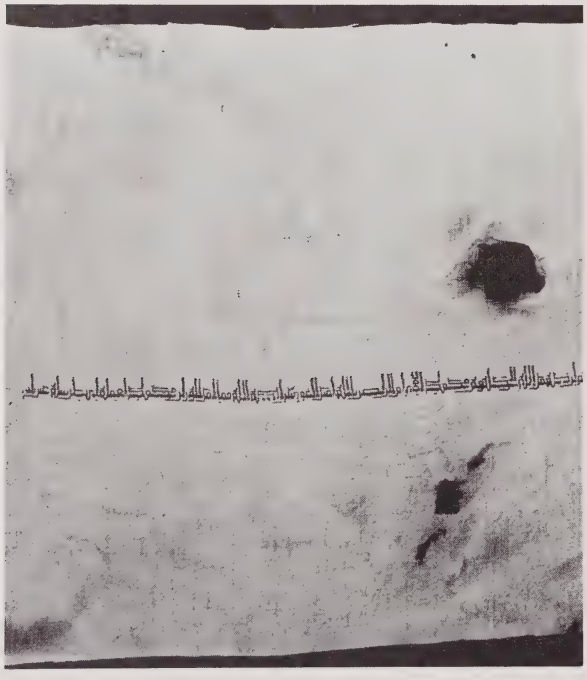
Writings of the times provide us with a great deal of data on the production and trade of textiles during the medieval Islamic period. Arabic geographers and historians give vivid descriptions of innumerable cities and marketplaces, and of the special products to be found in them. Among these, textiles appear to have been one of the most important. Stories like *Tales of the 1001 Nights,* in which clothing and fabrics are mentioned frequently, can also be regarded as testimony for the availability and use of various textiles. The documents of the Cairo Geniza, including business and private correspondence, inventories, and marriage contracts, are a source of even more factual information on the textile trade and the apparel of the middle and lower classes from the 10th century A.D. through the 13th. Chinese and Byzantine records indicate the degree to which Islamic textiles were exported both to the East and to the West.

Existing textiles from the period, however, are rare. The famous silks discovered in the tomb towers of Rayy, a large

Opposite page: Child's shirt, cotton with silk embroidery (length 54 cm, width 46 cm). Egypt, Coptic, 12th to 13th century.

Right: A detail from the child's shirt, depicting the Virgin with Child.



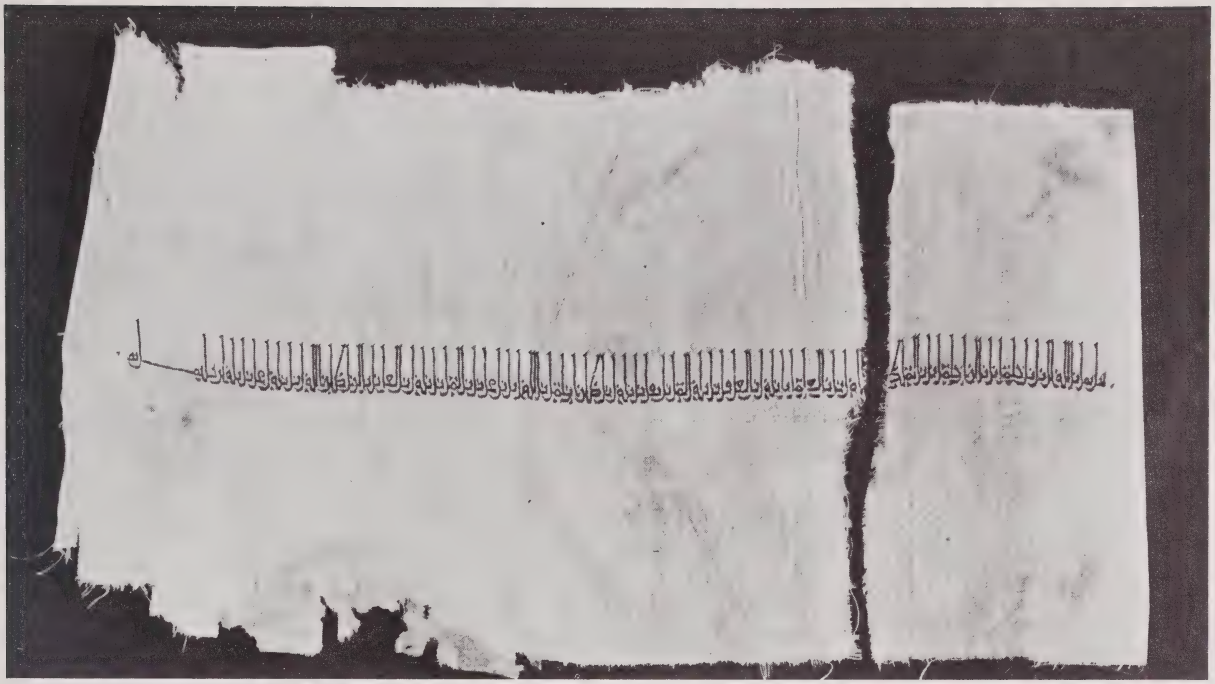


Top: Fragment of a shawl. Warp ikat *cotton with embroidered Arabic inscription in cotton. Yemen, 10th century.*

Bottom: Linen with embroidered Arabic inscription in silk. Egypt, 10th century.

metropolis in northern Iran, the finds at a few archaeological sites in western and central Asia, and a handful of interesting textile fragments in European church treasuries provide some insights into this once flourishing industry. However, the picture they present to us is by no means comprehensive, since Egypt is the only place where large quantities of textiles have been unearthed. Thanks to the favourable environmental conditions of that country—the dry heat and the sandy soil—cloth fragments, and often complete garments, have come to light at almost all the ancient burial grounds.

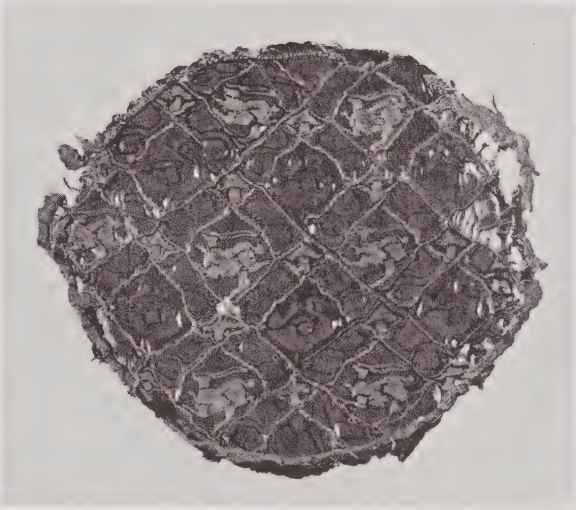
It is hardly surprising that the new ROM collection, too, originated in Egypt, and that for the most part it encompasses Egyptian textiles. Of the 1,178 pieces, more than 1,000 appear to be of Egyptian manufacture, and the remainder come from other provinces of the Caliphate. Among the latter, the best-represented groups are the fine cottons of Iran and Iraq with embroidered, and in some cases printed or painted, decoration (32 pieces); the *ikat*-dyed and striped fabrics of the Yemen (6 pieces); the resist-dyed and/or woodblock-printed cottons of India (34 pieces); and the Syrian, or rather Syro-Egyptian, figured silks (12 pieces). A few tapestry-woven examples may be associated with Mesopotamia (8 pieces), while other fragments appear to have originated in the western Mediterranean (10 pieces). The collection covers the entire period of medieval Islam from Umayyad to Mameluke times in Egypt. Some miscellaneous pieces may be pre-Islamic, deriving from Sassanian Iran and Coptic Egypt (30 pieces), while others come from Ottoman Egypt (40 pieces).



The provenance of the fragments is unknown, for they cannot be connected to documented archaeological excavations. The exceptionally large number of textiles in the collection, however, allows us to speculate that the proportion of the total collection represented by each group may reflect the corresponding proportion that group represented of goods available in Egypt, both locally made and imported. Furthermore, the variety of imported fabrics gives some impression of the textiles manufactured outside Egypt.

Most of the Egyptian textiles are made of linen. Egyptian linen was already famous in Pharaonic times, and it remained so through the medieval Islamic period. Although cotton was introduced in the 12th century, it was only much later that its use became widespread.

The Egyptian linens are usually adorned with tapestry-woven ornaments. This decoration was characteristic of late Roman and Byzantine fabrics, and the Islamic pieces obviously perpetuated this well-established tradition. The earliest examples, dating from the 8th and 9th centuries, were not only executed in the artistic style of Coptic textiles, but were usually woven with brightly coloured woollen wefts, as were their Coptic predecessors. From the 10th century on, most tapestry weaving was done with silk yarns. As a result, the scale of the patterning became much reduced, but for the most part the composition of the ornaments continued to follow that of late antique prototypes. The appearance of stylized animals and floral motifs, especially in the inhabited meander bands, can be understood only within the broader perspectives of their historical background, in which classical and



Top: Glazed cotton with embroidered Arabic inscription in silk. Iran or Iraq, 10th century.

Bottom: Linen with tapestry-woven decoration in silk and linen. Egypt, late 11th to early 12th century.

sub-antique styles were generously mixed. It is clear from the testimony of written documents that the Arabs frequently employed Copts in the textile industry, and that these Copts produced most of the goods in the large state-run factories, even as late as the Fatimid period.

Tapestry weaving, executed on a very fine scale with silk wefts, was not a new discovery of Islamic times. This type of decoration was already well known in late antiquity, but very few tapestry-woven textiles have come down to us. Because these fabrics were considered of great intrinsic value, they rarely accompanied their owners into their graves. By the 10th century, however, silk had become available to a large segment of the population, and consequently articles adorned with silk began to occur more frequently among grave goods.

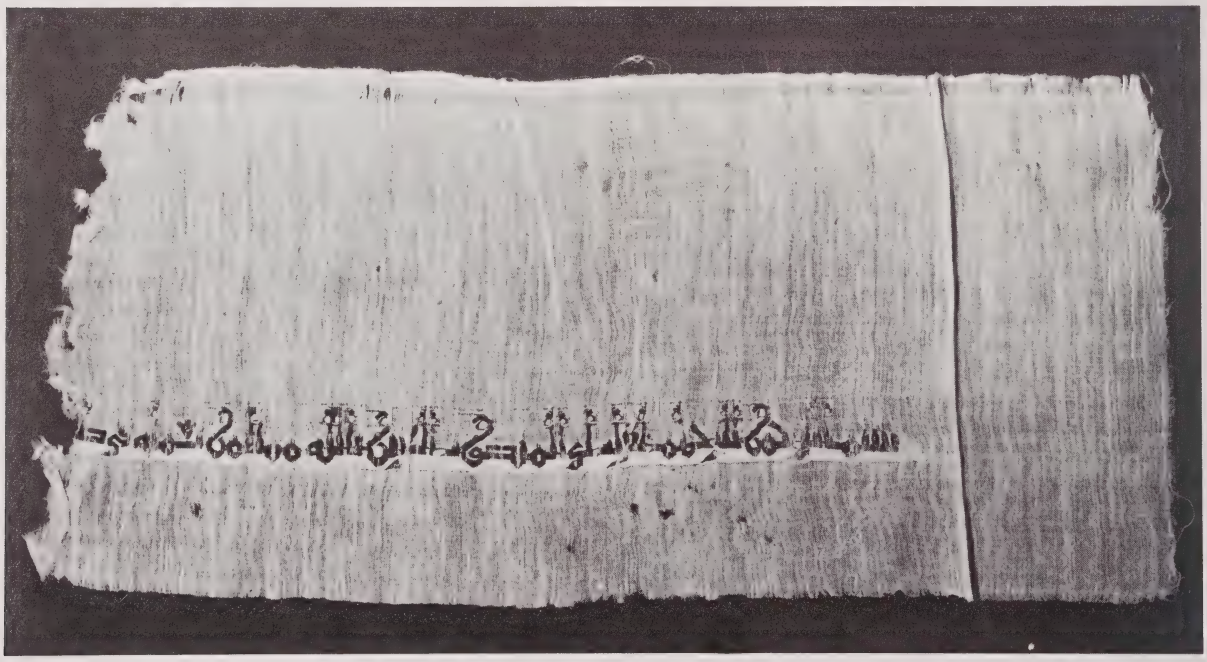
Gold thread was at the time a more valuable material for tapestry weaving than silk, and fabrics woven with this precious yarn were known as *kasab*. Numerous sources from the 10th century on attest that *kasab* was manufactured in the delta of the Nile. At Tinnis, the linen ground of this fabric was dyed in dark shades of blue or green, while at Damietta it was always left white.

All references indicate that *kasab* was a splendid cloth, and one of the most precious products of Egypt. Its fame spread throughout the Caliphate. Textile centres in such faraway places as Iran tried to copy *kasab*, and even in Egypt its appearance was imitated by the use of large amounts of yellow silk in the most elaborate silk tapestries. Most of these Egyptian imitations date from the 12th and early 13th centuries, when *kasab* was clearly desired by those groups of the middle class who were not able to pay for gold but could well afford the finest and richest work in silk. The ROM's new collection contains 26 fragments of exceptionally high quality.

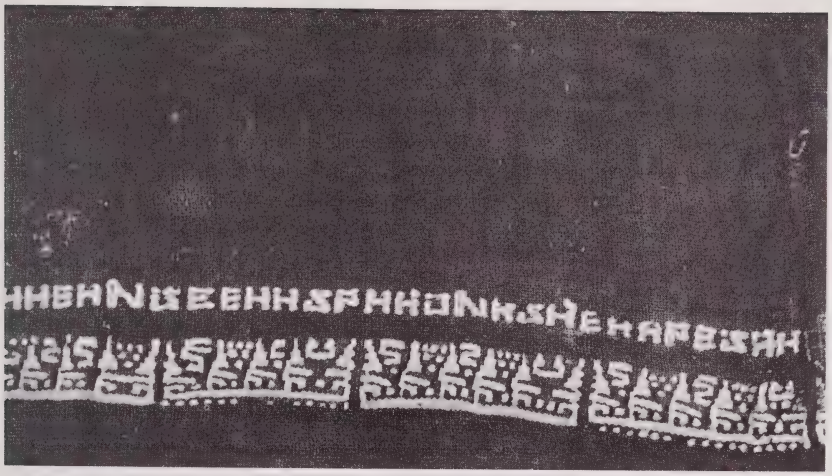
In addition to purely ornamental motifs, most Islamic textiles bear inscription bands. In fact, many pieces are adorned only with inscriptions. The vast number of inscribed pieces in the new ROM collection will serve as a basis for interpreting the role of writing on textiles according to patronage and time.

The text of the inscriptions is usually rather official, and in many ways repetitive. Until about the second half of the 11th century, most inscriptions contain a Koranic passage with blessings and good wishes. The ruling caliph is frequently mentioned in them, and the names of high-ranking officials are sometimes added. In a few cases, the name of the intendant of the textile workshop where the fabric was produced is also included. The place of manufacture and the date are usually placed at the end of these texts.

Thus, while the inscriptions have little literary merit, they provide the historian with a great deal of important securely dated information. Generally speaking, precise dates can rarely be associated with archaeological textiles. Even the well-documented context of an excavation seldom does more than place them within a fairly broad time span of one or two centuries. With Islamic textiles, however, the situation is rather different. Even if the actual year of manufacture is not given in the inscription, the appearance of names of historic personages and the style of the epigraphy pro-



Linen with tapestry-woven inscription in silk. Egypt, second half of 10th century.



Left: Detail of a shawl. Wool with tapestry-woven Arabic and embroidered Coptic inscriptions. Egypt, Fayyum, 10th century.

Below: Child's shirt. Linen with silk embroidery. Egypt, 14th century.

vide enough evidence for determining a fairly accurate date of production.

The inscription frequently specifies the kind of workshop (royal or public) in which a particular textile was produced. These workshops turned out the great quantities of fabrics needed by the caliphs for their courts and households, and for the gifts to be given to favoured subjects, high-ranking officials, and foreign sovereigns and delegations.

Arabic calligraphy on clothing was not exclusive to articles made for Moslem customers. In the Fayyum region of Egypt, Christians also had conventionalized Arabic texts woven into their woollen garments. These texts, however, were frequently accompanied by embroidered secondary inscriptions in Coptic characters.

Inscriptions were, moreover, looked on as trademarks. Idrisi, for example, noted about the Fayyum that "no curtains, robes, or other cloths are made without the names of the *tiraz* factories being placed upon them, whether it is the royal *tiraz*, or the public *tiraz* factories." Fabrics bearing trademarks, which gave authenticity to the pieces, were admired and desired by almost everyone. As a result, some lesser-known workshops began to work forged inscriptions into their products, which they then tried to pass off as coming from renowned centres. Makdisi remarked that the famous curtains of Basinna were copied in Wasit, and exported as real Basinna pieces, "but they are not like them".

Pseudo inscriptions, on the other hand, were produced for an illiterate public from at least as early as the 9th century. Pieces with such texts reflect a very different type of patronage, but show the high esteem in which fabrics with inscriptions were held. It is clear from the decoration of these articles that the workshops in which they were woven produced work of good quality, but had no learned people for drafting literate and legible inscriptions. Indeed, inscriptions became a purely ornamental element, an impression of calligraphy rather than calligraphy itself.

With the passing of time, the role of inscriptions seems to have undergone major changes. In the late 11th and particularly in the 12th century the texts became less historical and more generic, often containing nothing more than the repetition of a good wish, or a single holy word. Calligraphy became highly stylized and often entirely illegible, and the change led eventually to the victory of ornamentation. This kind of conventionalization and simplification of writing, however, cannot be explained simply as reflecting the demands of an illiterate public. It might rather be regarded as a sign of social change, in a period in which

Three examples of linen with tapestry-woven decoration and Arabic inscriptions in silk and linen. All from Egypt, 11th century.

Above: Detail with mounted saints from child's shirt illustrated on page 22.

Right: Linen with applied Arabic inscription. Egypt, 13th to 14th century.

the role of the central government was diminished and there was less need for courtly protocol than for artistic beauty.

From the 11th century on, there is also more evidence of requests from private individuals for personalized inscriptions, with their own names worked into their made-to-measure garments. At about the same time, lines of love poetry began to be worked into the borders of Persian handkerchiefs. Textiles expressed more and more the personal wishes of their owners, who for the most part came from middle-class backgrounds.

The influence of inscribed textiles from the eastern provinces of the Caliphate led in 9th- and 10th-century Egypt to adornment with embroidered inscriptions rather than tapestry-woven ones. There are about 100 such examples in the collection. Embroidery, however, did not become the favoured technique for ornamentation in Egypt until much later. It is not until the 12th and 13th centuries that the first group of elaborately embroidered articles appears. The ROM is extremely fortunate to have in this collection an almost whole Coptic child's shirt from that very period, the front of which is covered with embroidered figures of the Virgin with the Christ Child, archangels, mounted saints, and crosses. This exceptional piece with its Christian subject matter has only one close parallel in the world—housed in the Staatliche Museen in East Berlin. Depictions of this sort stem from contemporary manuscript illumination, though the same style and iconography also occurred on painted pottery. That such textiles must once have been common is well attested by a smaller fragment in our collection which bears a carefully composed, large embroidered cross, and which may well have been part of a similar shirt front.

By the 14th and 15th centuries, that is to say during the ascendancy of the Mameluke sultans, embroidery suddenly became the most popular technique for decorating textiles. Embroidered ornaments and inscriptions occurred on almost all types of clothing and cloth, with the exception of figured silks. The 90-odd fragments of Mameluke embroidery in our collection exhibit a wide variety of styles and stitches. From this rather large group of examples one can conclude that Italian Renaissance needlework must have evolved from a Mediterranean Islamic background, in which the role of Egypt may have been the most significant. Through Italian influence, this Islamic type of embroidery also influenced the birth of many European domestic embroidery styles.

The 15 children's shirts and a few large fragments of embroidered tunics provide important material for the study of embroidered clothing. Moreover, they demonstrate a new type of garment construction, which must have reached Egypt from the East. Such a collection of complete Mameluke garments is rivalled only by the holdings of the Victoria and Albert Museum in London, though the number of related pieces in that collection is smaller.

This enormous collection of medieval fabrics provides a comprehensive base for the study and understanding of the Islamic textile industry and its technology and artistry, and also of Arabic epigraphy. Innumerable social and economic questions, relating to the Mediterranean world and the Near East, and to the significance of trade in this area, may also be answered by this broad collection of "original sources", especially when the evidence the fabrics contain is compared with the testimony of written documents.

The acquisition of this monumental collection of Islamic textiles is a fine achievement for the Royal Ontario Museum. In view of the fact that the Museum already possesses significant holdings of Coptic fabrics from Egypt, and archaeologically documented material from Nubia, Toronto will now become an important international research centre for the study of medieval Mediterranean textiles. What is more, the collection has been designated a cultural property of outstanding significance by the Canadian Cultural Property Expert Review Board, an agency of the Secretary of State.

Dr. Veronika Gervers is Associate Curator in the Textile Department and has been with the ROM *since 1968. Working with Dr. Lisa Golombek of the West Asian Department, she has done extensive research on various aspects of medieval Islamic textiles. In 1977 they published the* ROM*'s* tiraz *fabrics in* Studies in Textile History in Memory of H.B. Burnham. *In the same year they organized a colloquium on medieval textiles from the Mediterranean world in connection with the annual meeting of the Medieval Academy of America, which was held in Toronto. In the near future they will begin to work on this new collection and plan a joint publication of a* catalogue raisonné.

Blowing in the Wind

Some Joys and Perils of Field Work in Ontario

Ross D. James

MY SUMMER FIELD WORK in 1977 began with a trip to the western Rainy River District in northwestern Ontario. Situated to the east of Lake of the Woods, this section of Ontario is a small pocket of prairie-like country, covered mainly with aspens rather than with the dense coniferous forests of the nearby areas. Much of the land has been cleared for farming, and a number of bird and animal species typical of more southern and western areas are to be found there. Of particular interest are Black-billed Magpies. Common in the western prairies, these birds now regularly spend the winter in southwestern Ontario, and I suspect that some may soon stay to nest. But no luck this year.

My assistants and I were able, however, to get the first Great Horned Owls from the area (from the Ministry of Natural Resources). These owls are typically very pale in colour, like those on the prairies, and quite unlike those in the rest of Ontario. In addition, we established the first breeding record of the Common Raven for the area. Forty-five years ago ravens were virtually unknown in summer around Rainy River, but garbage dumps and dozens of road-killed animals now provide a banquet to attract this opportunistic species.

We also experienced one of the worst plagues of

Opposite page: A Bonaparte's Gull in the Kenora District of Ontario.

Left: A young Great Horned Owl in the western Rainy River District. Its sandy colour is paler than found on other such owls in Ontario.

wood ticks I have ever encountered. So numerous were the ticks that standing still in a marsh for only a few minutes I could watch them crawl out of the reeds, over my boots, and up into my pantlegs. If you can tolerate their peregrinations over your body and through your hair, these small blood-sucking insects usually will do you no great harm. The trouble was that after picking them off my body all day, I would be kept awake at night by the dozen or more that I had failed to find before getting into my sleeping bag.

After leaving Rainy River we drove on to Pickle Lake, a small town that lies about 200 miles north of Thunder Bay in Kenora District and is surrounded by hundreds of acres of black spruce forests, open bogs, and small lakes. Here I was interested in gathering information on bird populations in forests which had not yet been subjected to logging. I also wished to search for the nests of species that are known to spend the summer in Ontario but have never been seen on a nest in the province.

In the latter quest we were soon rewarded. The Great Grey Owl is our largest owl, yet its activities and whereabouts remain one of the mysteries of our vast boreal forest, for it is seldom seen in the summer in Ontario. We were fortunate to find a pair that had taken over a raven's nest, situated about 65 feet up in a tall, slender aspen tree. The prospect of slippery-smooth aspen bark, with no limbs to grasp for the first 55 feet, was not enticing. However, I chose a sunny afternoon with only light winds, and climbed a tree adjacent to the owls' nest, from which point I spent about an hour and a half watching and photographing the birds. No matter how many trees you have been up before,swaying back and forth at the top of a tree 65 feet in the air is not without its moments of mild apprehension. The fact that you are looking at the first nest of a Great Grey Owl ever reported in Ontario is small consolation at the time.

Even so high in the air, I could not get away from the swarms of blackflies, though they were at their worst in the nearby bogs. In addition to the flies, bogs have their own special set of delights. Open floating bogs are a favourite habitat of the Great Yellowlegs, for whose nests we were also searching. So thin was the vegetation and so soft the mud that to travel on one of these bogs I had to make a portable "bridge". I cut three long poles and laid them on the surface. Then by moving each of the three wet, slippery logs in turn, while balancing on the other two, I was able to move the "bridge"

Above: Home away from home on Manitoulin Island.

Opposite page: Swaying high in the air in search of an owl's nest.

across the bog. But even with this apparatus I could not stand still long without sinking slowly in the mud. Turning corners was even more hazardous. One slip and I was up to my waist in mud before I could catch hold of my logs to avoid being submerged.

From Pickle Lake I returned briefly to Toronto to replenish supplies, and then with two assistants I set out for a two-week stay on Manitoulin Island, in northern Lake Huron. Although our visit was cut short, we did succeed in coming home with more than 150 nesting and breeding records, several of them new for the island. In a week and a half we visited fourteen town-

Above: The beauty of sunrise transforms the peace of night into a lively day in the wilds of Ontario.

Right: The spectacular pattern of burns etched on the author's back by lightning.

ships, conducted four or five censuses in each, and secured a great deal of information on bird populations. To accomplish this we worked, as usual, from dawn until dusk seven days a week.

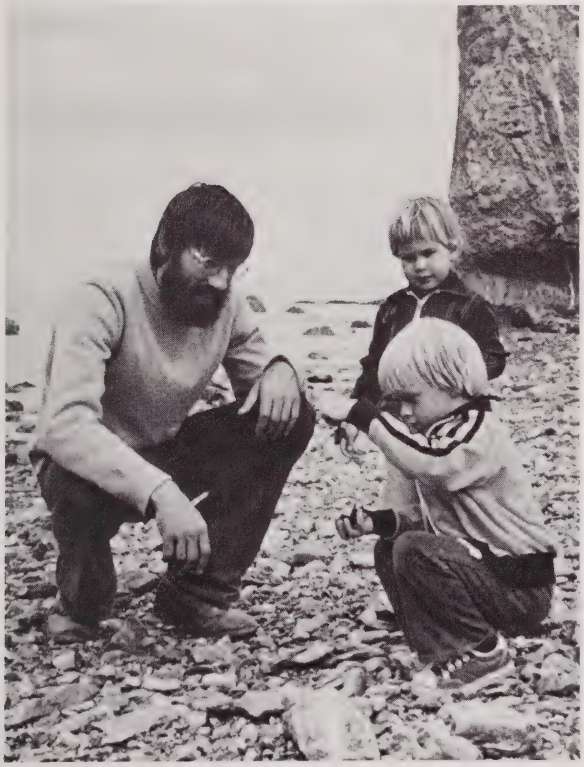
On the evening of July 5 we were camped in a remote and quiet spot on the island's southern shore. It had been a long and busy day, ending with the customary two or three hours of note writing. Alone in my pup tent, set among the pine trees a little way back from the shore, I prepared to sleep, as darkness settled over the land. In a larger tent a short distance away my two assistants were also preparing for the night. In the distance a whippoorwill was calling softly; the only other sound was that of the waves gently lapping the shore. We watched the first stars appear, little suspecting what lay ahead.

As we slept, clouds gathered, and about 4 A.M. a storm broke. A blinding flash of lightning accompanied by an almost simultaneous deafening clap of thunder, right over the tents, woke my assistants. Having felt the shock from the lightning, they made a bolt for the car and sat there through an earth-shaking storm that lasted until dawn—not dreaming that any harm might have come to me. In fact, when I awoke two hours later, I did not know there had even been a storm.

Immediately after regaining consciousness, I rushed from my tent and was violently sick for a couple of hours, but it was not until later in the day that I really appreciated what had happened. After my stomach had settled down and my headache had eased sufficiently to enable us to finish a number of jobs, we began to strike camp. Only then did I survey the damage to my tent, my air mattress, and my sleeping bag.

The lightning had melted and fused together the zippers on my tent. (Fortunately the centre vertical zipper, with both tabs melted off, had sprung open sufficiently for me to rush out in the morning.) The zipper on my sleeping bag was fused and there were holes burned in the mosquito netting of the tent. A large hole had been burned in the bottom of my sleeping bag, and the feather lining was scattered over the end of the tent. Travelling underneath me, the lightning had burned holes through a foam mattress, my air mattress, and my sleeping bag—and into my back in three places. The burns to my back were mostly first-degree, but one of three small third-degree burns has left a permanent scar. The burns did not hurt, at least not as badly as my head, and only when I took off my shirt that evening did I see the spectacular patterns seared into my skin. The concussion I received, apparently from being thrown into the air and landing on my head, has left me with a permanent small bald spot.

Such are some of the joys and hazards of field work. Perhaps I'm lucky to be alive. Nonetheless, having experienced its awesomeness, its thrill, its beauty, and its peace, I would not want to live without the wilderness.



Ross James received his B.Sc. from the University of Guelph and his M.Sc. and Ph.D. from the University of Toronto. He was appointed Assistant Curator in the Department of Ornithology at the ROM *in 1973. His interests in avian behaviour and ecology have taken him on numerous field trips to various parts of North America. Dr. James is also keenly interested in the distribution and abundance of Ontario birds and is co-author, with P.L. McLaren and J.C. Barlow, of* Annotated Checklist of the Birds of Ontario, *published by the* ROM *in 1976.*

Recent Publications

Catalogue of Type Invertebrate, Plant, and Trace Fossils in the Royal Ontario Museum, ROM Life Sciences Miscellaneous Publication, *Janet Waddington, Peter H. von Bitter,* and *Desmond Collins,* 152 pp., illustrated, $7.50 paper
This catalogue, the first published since 1946, records all types of fossil invertebrates, fossil plants, and trace fossils at present deposited in the Department of Invertebrate Palaeontology of the Royal Ontario Museum.

The Confederation Generation, *Mary Fallis Jones,* ROM, 112 pp., illustrated, $12.50 cloth, $5.95 paper; school edition: 128 pp., illustrated, $5.25 (net price) paper
This imaginative new book takes a light-hearted look at some of the people who lived in Canada a hundred years or so ago. Lively and amusing pictures and prints and text comprised almost entirely of quotations from newspapers, journals, weeklies, and private papers of the period highlight some of the things Confederation Canadians said, did, and cared about. Such topical issues as organized sport, urban development, the role of women in the work force, and the growth of nationalism and "Canadian Culture" are discussed. *The Confederation Generation* is available in both cloth and paper trade editions, as well as in a paper school edition that contains an additional 16 pages of student activities.

Contemporary Native Art of Canada—Manitoulin Island, *Ethnology Department,* ROM, 32 pp., illustrated, $3.50 paper
The articles and illustrations of paintings in this publication were prepared as a sequel to the recent Native Art Exhibition in the Ethnology Galleries. Contemporary Manitoulin art, comprising the work of three generations of painters, is discussed as being rooted in the ancient art form of pictography and in the philosophy and style of Ojibwa artist Norval Morrisseau. Articles on the history of Manitoulin Island and on the island's traditional significance to the Native population place the paintings in the time and space perspective to which they are linked. The publication provides insight into the painters' subjects, the varied influences on their art, and their individual styles through which their ideas, beliefs, and interpretations are portrayed.

Edu-Colour Book 703: Egypt, text by *N.B. Millet,* drawings by *Julian Mulock*
Edu-Colour Book 704: Native Peoples of North America, text by *Richard Daly,* drawings by *Julian Mulock*
ROM, each 16 pp., 8-1/2"x 11", $1.00 paper
Two imaginative new additions to the ROM's growing series of popular colouring books. Both books contain introductions, and concise captions accompany each

drawing. *Edu-Colour Book 703: Egypt* introduces ancient Egyptian civilization with 16 fascinating drawings of tomb paintings and related objects. *Edu-Colour Book 704: Native Peoples of North America* provides glimpses of early Native culture. The 16 large detailed drawings illustrate some of the customs and implements from daily life and various unique ceremonies. *Edu-Colour Books* provide an enjoyable way for children to learn about the wonders of the natural world and the marvels of its many cultures. Other available titles: *Edu-Colour Book 701: Dinosours and Later Prehistoric Animals* and *Edu-Colour Book 702: Insects.*

Egyptian Hieroglyphs, text by *N.B. Millet,* designed by *Douglas Champion,* ROM, 44"x 31", colour, $4.95 rolled in mailing tube
A striking wall chart that introduces the ancient Egyptian system of writing, with full-colour illustrations and text in English, French and German. The chart includes a sampling of the several hundred known hieroglyphs. It is divided into four columns of letters, phonograms, ideograms, and words. Other features of this chart include the beautiful design of the decorative names of King Ramesses III, examples of cartouches (oval frames which contain the name of a king or queen), and a few examples of amuletic signs. The large format and colourful design make the chart ideal for classroom use, but it also has general interest and can be a fascinating introduction to the realm of Egyptian hieroglyphs.

Excavation at Fengate, Peterborough, England: The Second Report, ROM Archaeology Monograph No. 5, *Francis Pryor,* 260 pp., illustrated, $11.50 paper
The Second Report is principally concerned with a Late Neolithic/Bronze Age Fen-margin settlement and its stock enclosures. The material from the earlier Neolithic house described in *The First Report* is summarized at the beginning of the book. The body of this report, however, discusses the 1973–74 excavations west of Storey's Bar Road giving the features which provide archaeological evidence for this settlement and the finds. An attempt to reconstruct various aspects of ancient life in and around the settlement during its various phases is discussed in the last two chapters of the book.

Mankind Discovering: A Plan for New Galleries at the Royal Ontario Museum, Volume 1, prepared by the *Exhibits Communication Task Force* with the assistance of *Urban Design Consultants,* ROM, 272 pp., illustrated, $15.00 paper
In 1976 the Exhibits Communication Task Force was formed to carry on the second phase of the work begun by the Communications Design Team. The CDT produced the report entitled *Communicating with the Museum Visitor.* Building upon the ideas presented in that report, a master plan for the galleries and exhibits in the renovated and expanded Museum has now been produced. Many issues have been considered in developing this plan. For example, the physical constraints of the building itself, the very special requirements of the precious collections housed in the Museum, and the needs of visitors to the Museum have been carefully researched, and creative ideas of the Museum's staff thoroughly explored. The bulk of *Mankind Discovering* is concerned with the development of and plan for the Museum's galleries and exhibits. A large section is devoted to proposals for implementing this plan. Although this book deals with the specific aspects of the Royal Ontario Museum's own renovation and expansion, it can provide principles and serve as a paradigm for other museums and institutions planning similar improvements.

Niagara: The Story of a River, ROM Earth Sciences Series, by *Walter M. Tovell,* 24 pp., illustrated, $2.00 paper
This is the first publication in the new ROM Earth Sciences Series, which will include booklets on various geographic, geological, and environmental features of Canada. *Niagara: The Story of a River* presents an interesting introduction to the origin and evolution of the Niagara River and the falls, and to the geology of the Niagara Gorge. The booklet is well illustrated with photographs, maps, diagrams, and tables.

Index 1978

Allodi, Mary; *Canadian Faces;* Vol. 11, no. 1:18
Ancient Trading Centre, An; *Veronika* and *Michael Gervers;* Vol. 11, no. 1:38
Armour Court Project, The; *Chris Toogood;* Vol. 11, no. 3:26
Barnett, R.E. and **D.M. Rudkin;** *First Things First;* Vol. 11, no. 2:26
Baum, Carol and **Susan Wilson;** *A Real Case History;* Vol. 11, no. 3:9
Block-Bolten, Izabella; *Complex Problems in Conservation;* Vol. 11, no. 3:20
Blowing in the Wind; *Ross D. James;* Vol. 11, no. 4:32
Campsie, John; *On a Meeting Place (Focus);* Vol. 11, no. 1:2
Campsie, John; *On Conservation (Focus);* Vol. 11, no. 3:2
Canadian Faces; *Mary Allodi;* Vol. 11, no. 1:18
Carson, Renate; *Similar Characters;* Vol. 11, no. 1:32
Cherish the Patina; *Carol J. Jack;* Vol. 11, no. 3:44
Collins, Desmond; *A Palaeontologist's Paradise;* Vol. 11, no. 4:12
Complex Problems in Conservation; *Izabella Block-Bolten;* Vol. 11, no. 3:20
Country Craft, A; *David L. Newlands;* Vol. 11, no. 2:34
Deck the Halls; *Janet Holmes;* Vol. 11, no. 4:4
Ekoi Mask with Skin Problems, An; *Julia Fenn;* Vol. 11, no. 3:18
Fenn, Julia; *An Ekoi Mask with Skin Problems;* Vol. 11, no. 3:18
First Things First; *R.E. Barnett* and *D.M. Rudkin;* Vol. 11, no. 2:26
For the Pleasure of Princes; *K. Corey Keeble;* Vol. 11, no. 2:40
Gervers, Veronika; *Rags to Riches;* Vol. 11, no. 4:22
Gervers, Veronika and **Michael Gervers ;** *An Ancient Trading Centre;* Vol. 11, no. 1:38
Gough, Mary; *They Carved the Stone;* Vol. 11, no. 2:4
Growing Collections, The; Vol. 11, no. 1:26; no. 2:23; no. 3:39; no. 4:20
Hickl-Szabo, Heribert; *Portrait Miniatures;* Vol. 11, no. 1:12
Holmes, Janet; *Deck the Halls;* Vol. 11, no. 4:4
Hundred Years of Dirt, A; *Diane McKay;* Vol. 11, no. 3:14
Jack, Carol J.; *Cherish the Patina;* Vol. 11, no. 3:44
James, Ross D.; *Blowing in the Wind;* Vol. 11, no. 4:32
Keeble, K. Corey; *For the Pleasure of Princes;* Vol. 11, no. 2:40
Keeble, K. Corey; *The Christmas Story in Stone (Focus);* Vol. 11, no. 4:2
King, Henry C.; *Time in Hours, Days, Years . . .;* Vol. 11, no. 2:14
Lovisek, Jim; *On Cooperative Studies in Belize (Focus);* Vol. 11, no. 2:2
McKay, Diane; *A Hundred Years of Dirt;* Vol. 11, no. 3:14
Ming Tomb, The; *George Pawlick;* Vol. 11, no. 3:30
Moir, Gillian; *An Un-Restoration Project;* Vol. 11, no. 3:34
Newlands, David L.; *A Country Craft;* Vol. 11, no. 2:34
On a Meeting Place *(Focus); John Campsie;* Vol. 11, no. 1:2
On Conservation *(Focus); John Campsie;* Vol. 11, no. 3:2
On Cooperative Studies in Belize *(Focus); Jim Lovisek;* Vol. 11, no. 2:2
On the Christmas Story in Stone *(Focus); K. Corey Keeble;* Vol. 11, no. 4:2
Palaeontologist's Paradise, A; *Desmond Collins;* Vol. 11, no. 4:12
Pawlick, George; *The Ming Tomb;* Vol. 11, no. 3:30
Phillimore, Elizabeth; *Through the Eye of Time;* Vol. 11, no. 3:4
Portrait Miniatures; *Heribert Hickl-Szabo;* Vol. 11, no. 1:12
Pryor, Francis; *Sites Within Sites;* Vol. 11, no. 1:4
Rags to Riches; *Veronika Gervers;* Vol. 11, no. 4:22
Real Case History, A; *Susan Wilson* and *Carol Baum;* Vol. 11, no. 3:9
Recent Publications; Vol. 11, no. 2:33; no. 4:38
Rudkin, D.M. and **R.E. Barnett;** *First Things First;* Vol. 11, no. 2:26
Similar Characters; *Renate Carson;* Vol. 11, no. 1:32
Sites Within Sites; *Francis Pryor;* Vol. 11, no. 1:4
They Carved the Stone; *Mary Gough;* Vol. 11, no. 2:4
Through the Eye of Time; *Elizabeth Phillimore;* Vol. 11, no. 3:4
Time in Hours, Days, Years . . .; *Henry C. King;* Vol. 11, no. 2:14
Toogood, Chris; *The Armour Court Project;* Vol. 11, no. 3:26
Un-Restoration Project, An; *Gillian Moir;* Vol. 11, no. 3:34
Wilson, Susan and **Carol Baum;** *A Real Case History;* Vol. 11, no. 3:9

ROM